

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-014844**Date Inspected:** 14-Jun-2010**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:****CWI Present:****Yes No****Inspected CWI report:** **Yes No N/A****Rod Oven in Use:****Yes No N/A****Electrode to specification:** **Yes No N/A****Weld Procedures Followed:****Yes No N/A****Qualified Welders:** **Yes No N/A****Verified Joint Fit-up:****Yes No N/A****Approved Drawings:** **Yes No N/A****Approved WPS:****Yes No N/A****Delayed / Cancelled:****Yes No N/A****Bridge No:** 34-0006**Component:** OBG Trial Assembly**Summary of Items Observed:**

On this date Caltrans OSM Quality Assurance (QA) Inspector, S. Manjunath Math was present during the time noted above for observations relative to the work being performed.

This QA Inspector randomly observed the following work in progress:

Orthotropic Box Girder (OBG) Trial Assembly Areas

Segment 7AW to 7BW (U-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for U-Rib to U-Rib at Panel Point (PP) 49 and PP 50 for Segment 7AW to 7BW. Inspected on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00380 Dated June 14, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220035 and final torque required was 433 N-m

Bolt sizes used were M22 x 80 RC Set# DHGM220029 and final torque required was 447 N-m

Bolt sizes used were M22 x 80 RC Set# DHGM220091 and final torque required was 460 N-m

Bolt sizes used were M22 x 85 RC Set# DHGM220098 and final torque required was 353 N-m

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Manual Torque wrench was been used with Sr. No. XQ2-675.

Reinforcing Splice Plates are Installed at U-Ribs (as offset exceeds by 5mm) at 16, 17, 31, 33, 34, 35, 36, 37 and 38 locations.

Note: U-Ribs numbering reference taken from Counter Weight side as 1st U-Rib and towards Cross Beam side as 39th U-Rib.

Segment 7BW to 7CW (U-Ribs)

This Quality Assurance (QA) Inspector witnessed final tension verification for U-Rib to U-Rib at Panel Point (PP) 52 and PP 53 for Segment 7BW to 7CW. Inspected on a random basis and found the tension to be in general compliance. Inspection was performed against the Notification No. 00381 Dated June 14, 2010.

Bolt sizes used were M22 x 65 RC Set# DHGM220035 and final torque required was 433 N-m

Bolt sizes used were M22 x 70 RC Set# DHGM220017 and final torque required was 520 N-m

Bolt sizes used were M22 x 80 RC Set# DHGM220091 and final torque required was 460 N-m

Bolt sizes used were M22 x 85 RC Set# DHGM220104 and final torque required was 380 N-m

Manual Torque wrench was been used with Sr. No. XQ2-675.

Reinforcing Splice Plates are Installed at U-Ribs (as offset exceeds by 5mm) at 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 21, 22, 31, 33, 34, 35, 36, 37, 38 and 39 locations.

Note: U-Ribs numbering reference taken from Counter Weight side as 1st U-Rib and towards Cross Beam side as 39th U-Rib.

Segment 8CW to 9AW (Longitudinal Diaphragm) Joint Survey

This QA Inspector performed Joint Inspection with ZPMC Survey Team and ABF Survey Team for the Longitudinal Diaphragm between Segment 8CW to 9AW (Field Segment Splice) between Panel Point (PP) 71 and PP 72 North(Counter Weight Side) and South (Cross Beam Side) side for Offset and Sweep. The offset was measured at 5 (five) different locations in which 2 (Two) locations were at Flange area and 3 (Three) locations were at Web area and Sweep was measured at 100 mm from both side from the Floor Beam and 800mm from both side of floor Beam and at Centre (Total 5 Locations). The measured readings were recorded on spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

Segment 7AW, 7BW, 7CW, 7DW and 7EW (Side Panel to Corner Assembly)

This QA Inspector performed Dimension Control Inspection the Side Panel to Corner Assembly Longitudinal Weld for the Skin Flatness after Heat Straightening from Panel Point (PP) 48 to PP 60 Cross Beam and Counter

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Weight Side. The measured readings with two point contact of straight edge observed within the acceptable limit. The measured readings were recorded on spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

Segment 7AW, 7BW, 7CW, 7DW and 7EW (Side Panel to Corner Assembly)

This QA Inspector performed Dimension Control Inspection the Deck Panel to Corner Assembly Longitudinal Weld for the Skin Flatness after Heat Straightening from Panel Point (PP) 48 to PP 60 Cross Beam and Counter Weight Side. The measured readings with two point contact of straight edge observed within the acceptable limit. The measured readings were recorded on spread sheet, generated the report and submitted to the Task Leader and Engineer for review.

Cross Beam (CB) # 10

This QA Inspector along with Caltrans QA Mr. Manoj Prabhune performed Joint Inspection for the Cross Beam # 10 for the Gap and Stiffener Offset at the following locations.

East Bound Vertical Position at PP 69

West Bound Vertical Position at PP 69

East Bound Vertical Position at PP 70

West Bound Vertical Position at PP 70

East Bound Vertical Position at PP 71

West Bound Vertical Position at PP 71

East Bound Bottom Panel at PP 69 to PP 70

West Bound Bottom Panel at PP 69 to PP 70

East Bound Bottom Panel at PP 70 to PP 71

West Bound Bottom Panel at PP 70 to PP 71

East Bound Deck Panel at PP 69 to PP 70

West Bound Deck Panel at PP 69 to PP 70

East Bound Deck Panel at PP 70 to PP 71

West Bound Deck Panel at PP 70 to PP 71

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The measured readings were fed in spread sheet, generated the report and submitted to the Lead and Engineer for review.

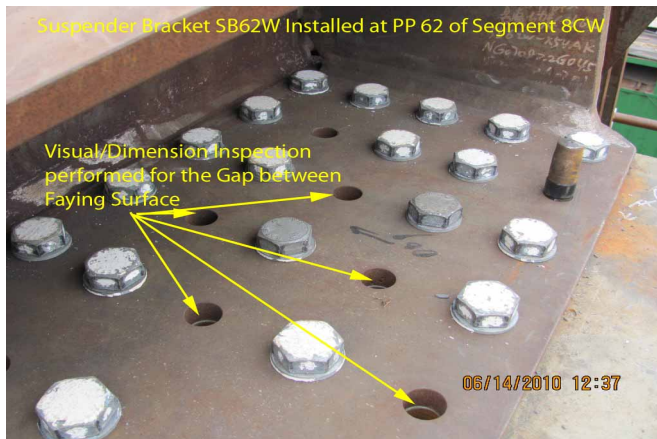
Suspender Bracket

This QA Inspector performed Dimension Control Inspection for the Suspender Brackets (SB) Installed at Counter Weight side for the following Segments and Suspender Brackets. The inspection was performed as per the Inspection Notification No. 00010 Dated June 14, 2010 as requested by ZPMC.

Suspender Bracket SB69W for Segment 8AW

The faying surface between the Deck Panel Corner Assembly to the Suspender Bracket measured and observed within the tolerance i.e., less than 2mm. Please refer the pictures attached below for more comprehensive details.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.



Summary of Conversations:

No relevant conversations.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric T Sang 1500-0042-2372, who represents the Office of Structural Materials for your project.

Inspected By: Math,Manjunath

Quality Assurance Inspector

Reviewed By: Carreon,Albert

QA Reviewer